

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended): A method for intercepting data exchanged by remote terminals (~~Tij-k~~), via a communications network, said data including in the form of control packets formatted according to a first real-time data transfer control protocol and associated with data previously exchanged by the said terminals, characterised in that it comprises a step in which the method comprising:

i) ~~in the case of transfer of data packets between at least two remote terminals (Tij-k), intercepting at least certain of the said data packets of a transfer between at least two remote terminals, are intercepted during the said transfer, so as to determine those which of said data packets are control packets, said control packets are being formatted according to the said first protocol;~~ then

ii) duplicating at least part of each of said control packets ~~packet thus formatted, referred to as a "control packet", is duplicated;~~ and

iii) communicating data representing the said duplicated part of each of said control packets ~~are communicated to a control application (1) located in the said network, so that it deduces said control application deducing therefrom information on the said transfer from said communicated data.~~

2. (Currently amended): A The method according to Claim 1, ~~characterised in that wherein all the control packets of said transfer between at least two remote terminals transferred~~ are intercepted.

3. (Currently amended): ~~A-The~~ method according to Claim 1, ~~characterised in that~~
wherein the control packets are sampled so as to intercept only one sample from amongst n, n
being a chosen integer value.

4. (Currently amended): ~~A-The~~ method according to Claim 1, ~~characterised in that~~
wherein determination of the formatting according to the first protocol concerns the
determination, amongst the packets, of those in which at least a network address field for the
terminal which sent the packet, a network address field for the destination terminal of the packet,
a destination port field and/or a source port field, and a protocol number field have chosen
values.

5. (Currently amended): ~~A-The~~ method according to Claim 4, ~~characterised in that~~
~~the~~ wherein said chosen values are communicated by an application and/or an item of equipment
in the network.

6. (Currently amended): ~~A-The~~ method according to Claim 1, ~~characterised in that,~~
further comprising:

between said intercepting ~~interception~~ and said duplicating ~~duplication~~, ~~a comparison is~~
~~performed~~ performing a comparison between a chosen threshold value and the value of a service
information field contained in the intercepted control packet;

wherein said duplicating comprises in order to duplicate duplicating only the part at least
of the control packet in which the service information field has a value substantially greater than
~~the~~ said chosen threshold value.

7. (Currently amended): ~~A~~ The method according to Claim 1-Claim 6, characterised
~~in that~~ further comprising:

between said intercepting and said duplicating, performing a comparison between a
chosen threshold value and the value of a service information field contained in the intercepted
control packet;

wherein the whole of each intercepted control packet, formatted according to the first
protocol and in which the service information field has a value substantially greater than ~~the~~ said
chosen threshold value, is duplicated, and ~~in that~~ the whole of ~~the~~ said duplicated control packet
is communicated.

8. (Currently amended): ~~A~~ The method according to Claim 6, characterised ~~in that~~
further comprising:

between said intercepting and said duplicating, performing a comparison between a
chosen threshold value and the value of a service information field contained in the intercepted
control packet;

wherein certain chosen fields contained in each intercepted control packet, formatted
according to the first protocol and in which the service information field has a value substantially
greater than ~~the~~ said chosen threshold value, are duplicated, and ~~in that~~ ~~the~~ said duplicated
chosen fields are communicated.

9. (Currently amended): ~~A-The method according to Claim 8, characterised in that~~
~~wherein~~ one of the duplicated and communicated chosen fields is ~~the~~ said service information
field.

10. (Currently amended): ~~A-The method according to Claim 8, characterised in that~~
~~the-wherein~~ said service information field is also duplicated, and ~~in that~~ information data
representing ~~the~~ said duplicated service information field are communicated with ~~the other~~ said
duplicated chosen fields.

11. (Currently amended): ~~A-The method according to Claim 1, characterised in that~~
~~wherein~~ certain chosen fields contained in each intercepted control packet, formatted according
to the first protocol, including at least a service information field, are duplicated.

12. (Currently amended): ~~A-The method according to Claim 11, characterised in that~~
~~wherein~~ information data representing ~~the~~ said duplicated service information field are
communicated with the other duplicated fields.

13. (Currently amended): ~~A-The method according to Claim 6, characterised in that~~
~~wherein~~ the service information field comprises data representing ~~the~~ a quality of service.

14. (Currently amended): ~~A-The method according to Claim 4 , characterised in that~~
wherein:

certain chosen fields contained in each intercepted control packet, formatted according to the first protocol and in which the service information field has a value substantially greater than the said threshold value, are duplicated, and ~~in that the said duplicated fields are communicated;~~ and

~~in that the said detected network address field for the terminal which sent the packet, the said detected network address field for the destination terminal of the packet, the said detected destination port field, and the said detected protocol number field are duplicated.~~

15. (Currently amended): ~~A~~ The method according to Claim 1, ~~characterised in that wherein~~ the whole of each intercepted control packet, formatted according to the first protocol, is duplicated.

16. (Currently amended): A device for intercepting data exchanged by remote terminals (~~T_{ij}-k~~), via a communications network, said data including in the form of packets formatted according to a first real-time data transfer control protocol and associated with data previously exchanged by ~~the said terminals, characterised in that it comprises the device~~ comprising:

interception means ~~(2) suitable, in the case of transfer of data packets between at least two remote terminals (T_{ij}-k), for intercepting at least certain of the said data packets of a transfer between at least two remote terminals, during the said transfer, and for determining amongst the intercepted data packets those which of said data packets are control packets, said control packets are being~~ formatted according to the said first protocol, ~~referred to as “control packets”;~~ and

management means ~~(3) suitable for~~ duplicating at least part of each of said intercepted control ~~packets~~ packet, and for generating data representing ~~the~~ said duplicated part of each of said control packets, intended to be communicated to control means ~~(1)~~ located in a control application ~~(S)~~ of the said network.

17. (Currently amended): A ~~The~~ device according to Claim 16, ~~characterised in that~~ ~~the wherein~~ said interception means ~~(2) are organised for intercepting~~ intercept all the control packets transferred ~~with a view to determining their format.~~

18. (Currently amended): A ~~The~~ device according to Claim 17, ~~characterised in that~~ ~~the wherein~~ said interception means ~~(2) are organised for sampling~~ sample the control packets in the process of being transferred, and ~~for intercepting~~ intercept only one sample from amongst n, n being a chosen integer value, ~~with a view to determining its format.~~

19. (Currently amended): A ~~The~~ device according to Claim 16, ~~characterised in that~~ ~~the wherein~~ said interception means ~~(2) are organised for i) detecting~~

detect from amongst the packets those in which at least a network address field for the terminal which sent the packet, a network address field for the destination terminal of the packet, a destination port field and/or a source port field, and a protocol number field have chosen values; and

ii) ~~retaining~~ retain the packets having ~~the~~ said chosen values, these packets then being referred to as intercepted control packets.

20. (Currently amended): ~~A~~The device according to Claim 19, ~~characterised in that~~
~~wherein the~~ said interception means (2) ~~are organised~~organized for receiving the said chosen
values from at least one of an application and/or and from an item of equipment in the network.

21. (Currently amended): ~~A~~The device according to Claim 16, ~~characterised in that~~
~~wherein the~~ said interception means (2) ~~are organised~~organized for detecting a service
information field contained in each intercepted control packet, and for performing, between
interception and duplication, a comparison between a stored chosen threshold value and the
value of the detected service information field, so that the management means (3) ~~duplicate only~~
the part at least of the control packet in which the service information field has a value
substantially greater than ~~the~~ said threshold value.

22. (Currently amended): ~~A~~The device according to Claim 21, ~~characterised in that~~
~~wherein the~~ said interception means (2) ~~are organised~~organized for communicating to ~~the~~ said
management means (3) ~~the whole of each intercepted control packet in which the service~~
information field has a value substantially greater than ~~the~~ said threshold value, and ~~in that the~~
said management means (3) ~~are organised~~organized for duplicating the whole of each
intercepted control packet received, and communicating to ~~the~~ said control means the whole of
~~the~~ said duplicated control packet.

23. (Currently amended): ~~A~~The device according to Claim 21, ~~characterised in that~~
~~wherein the~~ said interception means (2) ~~are organised~~organized for communicating to ~~the~~ said
management means (3) ~~certain chosen fields contained in each intercepted control packet in~~

which the service information field has a value substantially greater than ~~the~~ said threshold value, and ~~in that the~~ said management means (3) are ~~organised~~ organized for duplicating the said chosen fields of each intercepted control packet received and communicating ~~the~~ said duplicated fields to ~~the~~ said control means.

24. (Currently amended): A ~~The~~ device according to Claim 23, ~~characterised in that~~ wherein one of the duplicated and communicated fields is ~~the~~ said service information field.

25. (Currently amended): A ~~The~~ device according to Claim 23, ~~characterised in that~~ wherein ~~the~~ said interception means (2) are ~~organised~~ organized for communicating ~~the~~ said service information field to ~~the~~ said management means (3), and ~~in that the~~ said management means (3) are ~~organised~~ organized for duplicating ~~the~~ said service information field and communicating, with ~~the~~ other duplicated fields, information data representing ~~the~~ said duplicated service information field.

26. (Currently amended): A ~~The~~ device according to Claim 16, ~~characterised in that~~ wherein ~~the~~ said management means (3) are ~~organised~~ organized for duplicating certain chosen fields contained in each intercepted control packet, formatted according to the first protocol, including at least a service information field.

27. (Currently amended): A ~~The~~ device according to Claim 23, ~~characterised in that~~ wherein ~~the~~ said management means (3) are ~~organised~~ organized for communicating information

data, representing the said duplicated service information field, in addition to the other duplicated fields.

28. (Currently amended): A The device according to Claim 21, ~~characterised in that~~ wherein the service information field comprises data representing the quality of service.

29. (Currently amended): A The device according to Claim 19, ~~characterised in that~~ wherein said interception means are ~~organised~~ organized for detecting a service information field contained in each intercepted control packet, and for performing, between interception and duplication, a comparison between a stored chosen threshold value and the value of the detected service information field, so that the management means (3) duplicate only the part at least of the control packet in which the service information field has a value substantially greater than the said threshold value; and

~~in that the~~ said management means (3) are ~~organised~~ organized for duplicating the said network address field for the terminal which sent the intercepted packet, ~~the~~ said network address field for the destination terminal of the intercepted control packet, ~~the~~ said destination port field and ~~the~~ said protocol number field, and for communicating the said duplicated fields to the control means (1).

30. (Currently amended): A The device according to Claim 16, ~~characterised in that~~ wherein ~~the~~ said management means (3) are ~~organised~~ organized for duplicating the whole of each intercepted control packet, formatted according to the first protocol, and for communicating to ~~the~~ said control means (1) the whole of the said duplicated control packet.

31. (Currently amended): ~~A~~ The device according to Claim 16, ~~characterised in that~~
~~wherein~~ the said interception means (2) are located in at least one of the items of network
equipment through which the streams intended for the said terminals flow.

32. (Currently amended): ~~A~~ The device according to Claim 16, ~~characterised in that~~
~~wherein~~ the said management means (3) are located in at least one of the items of equipment
(~~RC-k; RPj-k~~) in the network to which the said terminals (~~Tij-k~~) are connected.

33. (Currently amended): ~~A~~ The device according to Claim 31, ~~characterised in that~~
~~wherein~~ the network equipment is chosen from a group comprising routers, NAT boxes,
firewalls and traffic shapers.

34. (Currently amended): ~~Use of the method and~~ The device according to claim 16,
~~wherein in networks chosen from amongst said network is at least one of a public and a private~~
~~network networks.~~

35. (Currently amended): ~~Use~~ The device according to Claim 34, ~~characterised in~~
~~that~~ ~~wherein~~ the said network is the Internet.

36. (Currently amended): ~~Use~~ The device according to Claim 34, ~~characterised in~~
~~that~~ ~~wherein~~ the first protocol is called RTCP, and is associated with a real-time data transfer
protocol called RTP.

37. (Currently amended): ~~Use~~ The device according to Claim 34, ~~characterised in~~
~~that wherein~~ the duplicated data are communicated according to a protocol chosen from a group
comprising the COPS and SNMP protocols, and ~~the~~ encapsulation protocols.